

REMARKS

This is a full and timely response to the outstanding non-final Office Action mailed November 29, 2006. Through this response, claims 1-12 have been amended. Reconsideration and allowance of the application and pending claims 1-12 are respectfully requested.

I. Examiner Interview

Applicants first wish to express their sincere appreciation for the time that Examiner Burd spent with Applicants' representative, Blake Dorr (USPTO Reg. No. 54,711), during a telephone discussion on April 11, 2007, regarding the outstanding Office Action. During that conversation, Applicants discussed claims 1-12, the 35 U.S.C. § 101 rejection, and the admitted prior art reference. No conclusions were made. Applicants have prepared amendments to the claims that Applicants believe are consistent with the suggestions made by Examiner Burd. Thus, Applicants respectfully request that Examiner Burd carefully consider this response and the amendments.

II. Claim Rejections - 35 U.S.C. § 101

Claims 1-12 have been rejected under 35 U.S.C. § 101, because the claims are allegedly directed to non-statutory subject matter. Though Applicants respectfully traverse the rejection, Applicants have amended claims 1-12 in the interest of furthering the prosecution of the application. In that the rejection is believed to have been overcome, Applicants respectfully request that the rejection of these claims under 35 U.S.C. § 101 be withdrawn.

III. Claim Rejections - 35 U.S.C. § 102(a)

A. Statement of the Rejection

Claims 1-12 have been rejected under 35 U.S.C. § 102(a) as being anticipated by the instant application's disclosed prior art (specifically figures 3 and 4).

B. Discussion of the Rejection

It is axiomatic that "[a]nticipation requires the disclosure in a single prior art reference of each element of the claim under consideration." *W. L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1554, 220 USPQ 303, 313 (Fed. Cir. 1983). Therefore, every claimed feature of the claimed invention must be represented in the applied reference to constitute a proper rejection under 35 U.S.C. § 102(a).

Independent Claim 1

Claim 1 recites (emphasis added):

1. A semiconductor and logic comprising a power spectral density (PSD) mask for spectral shaping of an asynchronous digital subscriber line (ADSL) overlap spectrum transmission over a plain old telephone system (POTS), the PSD mask represented at least in part by a plurality of break points, the plurality of break points including: $-97.5 \pm 10\%$ decibel-milliwatts per hertz (dBm/Hz) at $0 \pm 10\%$ kilohertz (kHz); $-97.5 \pm 10\%$ dBm/Hz at $4 \pm 10\%$ kHz; $-92.5 \pm 10\%$ dBm/Hz at $4 \pm 10\%$ kHz; $-36.5 \pm 10\%$ dBm/Hz at $25 \pm 10\%$ kHz; $-36.5 \pm 10\%$ dBm/Hz at $1104 \pm 10\%$ kHz; **$-46.5 \pm 10\%$ dBm/Hz at $2208 \pm 10\%$ kHz; $-101.5 \pm 10\%$ dBm/Hz at $3925 \pm 10\%$ kHz; $-101.5 \pm 10\%$ dBm/Hz at $8500 \pm 10\%$ kHz; $-103.5 \pm 10\%$ dBm/Hz at $8500 \pm 10\%$ kHz; and $-103.5 \pm 10\%$ dBm/Hz at $11040 \pm 10\%$ kHz.**

Applicants respectfully submit that the rejection of claim 1 has been rendered moot.

Additionally, Applicants respectfully submit that the instant application's disclosed prior art (Fig. 3 and Fig. 4) fails to disclose, teach, or suggest the above emphasized claim features.

The Office Action alleges (page 2):

Regarding claims 1-12, Figures 3 and 4 of the instant applications [sic] disclose identical spectral masks in an ADSL system. The PSD mask is represented by a plurality of break points and the plurality of break points includes approximately -97.5 decibel-milliwatts per Hertz at

approximately 0 kilohertz. In addition, -90 dBm/Hz is approximately -97.5 dBm/Hz.

Applicants respectfully disagree. Neither Fig. 3 nor Fig. 4 disclose a break point at “-46.5 \pm 10% dBm/Hz at 2208 \pm 10% kHz.” Additionally, Figs. 3 and 4 do not disclose, teach, or suggest the claimed features of break points at “-101.5 \pm 10% dBm/Hz at 3925 \pm 10% kHz; -101.5 \pm 10% dBm/Hz at 8500 \pm 10% kHz; -103.5 \pm 10% dBm/Hz at 8500 \pm 10% kHz; and -103.5 \pm 10% dBm/Hz at 11040 \pm 10% kHz.” Figures 3 and 4 fail to disclose these claimed features for at least the reason that the highest break point frequency disclosed in Figs. 3 and 4 appears to be at 3093 kHz. Figure 3 and 4 simply do not disclose any break points at a frequency higher than 3093 kHz. Thus, for at least these reasons, Applicants respectfully request that the rejection of claim 1 be withdrawn.

Independent Claim 2

Claim 2 recites (emphasis added):

2. A semiconductor and logic comprising a power spectral density (PSD) mask for spectral shaping of an asynchronous digital subscriber line (ADSL) overlap spectrum transmission over a plain old telephone system (POTS), the PSD mask represented at least in part by a plurality of break points, the plurality of break points including: -97.5 \pm 10% decibel-milliwatts per hertz (dBm/Hz) at 0 \pm 10% kilohertz (kHz); -97.5 \pm 10% dBm/Hz at 4 \pm 10% kHz; **-72.5 \pm 10% dBm/Hz at 80 \pm 10% kHz; -36.5 \pm 10% dBm/Hz at 138 \pm 10% kHz; -36.5 \pm 10% dBm/Hz at 1104 \pm 10% kHz; -46.5 \pm 10% dBm/Hz at 2208 \pm 10% kHz; -101.5 \pm 10% dBm/Hz at 3925 \pm 10% kHz; -101.5 \pm 10% dBm/Hz at 8500 \pm 10% kHz; -103.5 \pm 10% dBm/Hz at 8500 \pm 10% kHz; and -103.5 \pm 10% dBm/Hz at 11040 \pm 10% kHz.**

Applicants respectfully submit that the rejection of claim 2 has been rendered moot. Additionally, Applicants respectfully submit that the instant application's disclosed prior art (Fig. 3 and Fig. 4) fails to disclose, teach, or suggest the above emphasized claim features for similar reasons as discussed regarding the rejection of claim 1 above. Namely, Figs. 3 and 4 do not disclose a plurality of break points at the values or

frequencies emphasized in the recitation of the claim above. Thus, for at least these reasons, Applicants respectfully request that the rejection of claim 2 be withdrawn.

Independent Claim 3

Claim 3 recites (emphasis added):

3. A semiconductor and logic comprising a power spectral density (PSD) mask for spectral shaping of an asynchronous digital subscriber line (ADSL) overlap spectrum transmission over a plain old telephone system (POTS), the PSD mask represented at least in part by a plurality of break points, the plurality of break points including: $-97.5 \pm 10\%$ decibel-milliwatts per hertz (dBm/Hz) at $0 \pm 10\%$ kilohertz (kHz); $-97.5 \pm 10\%$ dBm/Hz at $4 \pm 10\%$ kHz; $-92.5 \pm 10\%$ dBm/Hz at $4 \pm 10\%$ kHz; **$-56.5 \pm 10\%$ dBm/Hz at $25 \pm 10\%$ kHz; $-56.5 \pm 10\%$ dBm/Hz at $1104 \pm 10\%$ kHz; $-46.5 \pm 10\%$ dBm/Hz at $2208 \pm 10\%$ kHz; $-101.5 \pm 10\%$ dBm/Hz at $3925 \pm 10\%$ kHz; $-101.5 \pm 10\%$ dBm/Hz at $8500 \pm 10\%$ kHz; $-103.5 \pm 10\%$ dBm/Hz at $8500 \pm 10\%$ kHz; and $-103.5 \pm 10\%$ dBm/Hz at $11040 \pm 10\%$ kHz.**

Applicants respectfully submit that the rejection of claim 3 has been rendered moot. Additionally, Applicants respectfully submit that the instant application's disclosed prior art (Fig. 3 and Fig. 4) fails to disclose, teach, or suggest the above emphasized claim features for similar reasons as discussed regarding the rejection of claim 1 above. Namely, Figs. 3 and 4 do not disclose a plurality of break points at the values or frequencies emphasized in the recitation of the claim above. Thus, for at least these reasons, Applicants respectfully request that the rejection of claim 3 be withdrawn.

Independent Claim 4

Claim 4 recites (emphasis added):

4. A semiconductor and logic comprising a power spectral density (PSD) mask for spectral shaping of an asynchronous digital subscriber line (ADSL) overlap spectrum transmission over a plain old telephone system (POTS), the PSD mask represented at least in part by a plurality of break points, the plurality of break points including: $-97.5 \pm 10\%$ decibel-milliwatts per hertz (dBm/Hz) at $0 \pm 10\%$ kilohertz (kHz); $-97.5 \pm 10\%$ dBm/Hz at $4 \pm 10\%$ kHz; **$-92.5 \pm 10\%$ dBm/Hz at 80 kHz; $-56.5 \pm 10\%$ dBm/Hz at $138 \pm 10\%$ kHz; $-56.5 \pm 10\%$ dBm/Hz at $1104 \pm 10\%$ kHz; $-46.5 \pm 10\%$ dBm/Hz at $2208 \pm 10\%$ kHz; $-101.5 \pm 10\%$ dBm/Hz at $3925 \pm 10\%$ kHz; $-101.5 \pm 10\%$ dBm/Hz at $8500 \pm 10\%$ kHz;**

-103.5 ± 10% dBm/Hz at 8500 ± 10% kHz; and -103.5 ± 10% dBm/Hz at 11040 ± 10% kHz.

Applicants respectfully submit that the rejection of claim 4 has been rendered moot. Additionally, Applicants respectfully submit that the instant application's disclosed prior art (Fig. 3 and Fig. 4) fails to disclose, teach, or suggest the above emphasized claim features for similar reasons as discussed regarding the rejection of claim 1 above. Namely, Figs. 3 and 4 do not disclose a plurality of break points at the values or frequencies emphasized in the recitation of the claim above. Thus, for at least these reasons, Applicants respectfully request that the rejection of claim 4 be withdrawn.

Independent Claim 5

Claim 5 recites (emphasis added):

5. A semiconductor and logic comprising a power spectral density (PSD) mask for spectral shaping of an asynchronous digital subscriber line (ADSL) overlap spectrum over an integrated digital services network (ISDN), the PSD mask represented at least in part by a plurality of break points, the plurality of break points including: ***-90 ± 10% decibel-milliwatts per hertz (dBm/Hz) at 0 ± 10% kilohertz (kHz); -90 ± 10% dBm/Hz at 93.1 ± 10% kHz; -62 ± 10% dBm/Hz at 209 ± 10% kHz; -36.5 ± 10% dBm/Hz at 255 ± 10% kHz; -36.5 ± 10% dBm/Hz at 1104 ± 10% kHz; -46.5 ± 10% dBm/Hz at 2208 ± 10% kHz; -101.5 ± 10% dBm/Hz at 3925 ± 10% kHz; -101.5 ± 10% dBm/Hz at 8500 ± 10% kHz; -103.5 ± 10% dBm/Hz at 8500 ± 10% kHz; and -103.5 ± 10% dBm/Hz at 11040 ± 10% kHz.***

Applicants respectfully submit that the rejection of claim 5 has been rendered moot. Additionally, Applicants respectfully submit that the instant application's disclosed prior art (Fig. 3 and Fig. 4) fails to disclose, teach, or suggest the above emphasized claim features for similar reasons as discussed regarding the rejection of claim 1 above. Namely, Figs. 3 and 4 do not disclose a plurality of break points at the values or frequencies emphasized in the recitation of the claim above. Thus, for at least these reasons, Applicants respectfully request that the rejection of claim 5 be withdrawn.

Independent Claim 6

Claim 6 recites (emphasis added):

6. A semiconductor and logic comprising a power spectral density (PSD) mask for spectral shaping of an asynchronous digital subscriber line (ADSL) overlap spectrum over an integrated digital services network (ISDN), the PSD mask represented at least in part by a plurality of break points, the plurality of break points including: **-90 ± 10% decibel-milliwatts per hertz (dBm/Hz) at 0 ± 10% kilohertz (kHz); -90 ± 10% dBm/Hz at 93.1 ± 10% kHz; -62 ± 10% dBm/Hz at 209 ± 10% kHz; -56.5 ± 10% dBm/Hz at 255 ± 10% kHz; -56.5 ± 10% dBm/Hz at 1104 ± 10% kHz; -46.5 ± 10% dBm/Hz at 2208 ± 10% kHz; -101.5 ± 10% dBm/Hz at 3925 ± 10% kHz; -101.5 ± 10% dBm/Hz at 8500 ± 10% kHz; -103.5 ± 10% dBm/Hz at 8500 ± 10% kHz; and -103.5 ± 10% dBm/Hz at 11040 ± 10% kHz.**

Applicants respectfully submit that the rejection of claim 6 has been rendered moot. Additionally, Applicants respectfully submit that the instant application's disclosed prior art (Fig. 3 and Fig. 4) fails to disclose, teach, or suggest the above emphasized claim features for similar reasons as discussed regarding the rejection of claim 1 above. Namely, Figs. 3 and 4 do not disclose a plurality of break points at the values or frequencies emphasized in the recitation of the claim above. Thus, for at least these reasons, Applicants respectfully request that the rejection of claim 6 be withdrawn.

Independent Claim 7

Claim 7 recites (emphasis added):

7. A power spectral density (PSD) mask represented at least in part by a plurality of break points, the plurality of break points including: **-97.5 ± 5% decibel-milliwatts per hertz (dBm/Hz) at 0 ± 5% kilohertz (kHz); -97.5 ± 5% dBm/Hz at 4 ± 5% kHz; -92.5 ± 5% dBm/Hz at 4 ± 5% kHz; -36.5 ± 5% dBm/Hz at 25 ± 5% kHz; -36.5 ± 5% dBm/Hz at 1104 ± 5% kHz; -46.5 ± 5% dBm/Hz at 2208 ± 5% kHz; -101.5 ± 5% dBm/Hz at 3925 ± 5% kHz; -101.5 ± 5% dBm/Hz at 8500 ± 5% kHz; -103.5 ± 5% dBm/Hz at 8500 ± 5% kHz; and -103.5 ± 5% dBm/Hz at 11040 ± 5% kHz.**

Applicants respectfully submit that the rejection of claim 7 has been rendered moot. Additionally, Applicants respectfully submit that the instant application's disclosed prior art (Fig. 3 and Fig. 4) fails to disclose, teach, or suggest the above emphasized claim features for similar reasons as discussed regarding the rejection of claim 1 above. Namely, Figs. 3 and 4 do not disclose a plurality of break points at the values or frequencies emphasized in the recitation of the claim above. Thus, for at least these reasons, Applicants respectfully request that the rejection of claim 7 be withdrawn.

Independent Claim 8

Claim 8 recites (emphasis added):

8. A power spectral density (PSD) mask represented at least in part by a plurality of break points, the plurality of break points including: $-97.5 \pm 5\%$ decibel-milliwatts per hertz (dBm/Hz) at $0 \pm 5\%$ kilohertz (kHz); $-97.5 \pm 5\%$ dBm/Hz at $4 \pm 5\%$ kHz; **$-72.5 \pm 5\%$ dBm/Hz at $80 \pm 5\%$ kHz; $-36.5 \pm 5\%$ dBm/Hz at $138 \pm 5\%$ kHz; $-36.5 \pm 5\%$ dBm/Hz at $1104 \pm 5\%$ kHz; $-46.5 \pm 5\%$ dBm/Hz at $2208 \pm 5\%$ kHz; $-101.5 \pm 5\%$ dBm/Hz at $3925 \pm 5\%$ kHz; $-101.5 \pm 5\%$ dBm/Hz at $8500 \pm 5\%$ kHz; $-103.5 \pm 5\%$ dBm/Hz at $8500 \pm 5\%$ kHz; and $-103.5 \pm 5\%$ dBm/Hz at $11040 \pm 5\%$ kHz.**

Applicants respectfully submit that the rejection of claim 8 has been rendered moot. Additionally, Applicants respectfully submit that the instant application's disclosed prior art (Fig. 3 and Fig. 4) fails to disclose, teach, or suggest the above emphasized claim features for similar reasons as discussed regarding the rejection of claim 1 above. Namely, Figs. 3 and 4 do not disclose a plurality of break points at the values or frequencies emphasized in the recitation of the claim above. Thus, for at least these reasons, Applicants respectfully request that the rejection of claim 8 be withdrawn.

Independent Claim 9

Claim 9 recites (emphasis added):

9. A power spectral density (PSD) mask represented at least in part by a plurality of break points, the plurality of break points including: $-97.5 \pm 5\%$ decibel-milliwatts per hertz (dBm/Hz) at $0 \pm 5\%$ kilohertz (kHz); $-97.5 \pm 5\%$ dBm/Hz at $4 \pm 5\%$ kHz; $-92.5 \pm 5\%$ dBm/Hz at $4 \pm 5\%$

kHz; -56.5 ± 5% dBm/Hz at 25 ± 5% kHz; -56.5 ± 5% dBm/Hz at 1104 ± 5% kHz; -46.5 ± 5% dBm/Hz at 2208 ± 5% kHz; -101.5 ± 5% dBm/Hz at 3925 ± 5% kHz; -101.5 ± 5% dBm/Hz at 8500 ± 5% kHz; -103.5 ± 5% dBm/Hz at 8500 ± 5% kHz; and -103.5 ± 5% dBm/Hz at 11040 ± 5% kHz.

Applicants respectfully submit that the rejection of claim 9 has been rendered moot. Additionally, Applicants respectfully submit that the instant application's disclosed prior art (Fig. 3 and Fig. 4) fails to disclose, teach, or suggest the above emphasized claim features for similar reasons as discussed regarding the rejection of claim 1 above. Namely, Figs. 3 and 4 do not disclose a plurality of break points at the values or frequencies emphasized in the recitation of the claim above. Thus, for at least these reasons, Applicants respectfully request that the rejection of claim 9 be withdrawn.

Independent Claim 10

Claim 10 recites (emphasis added):

10. A semiconductor and logic comprising a power spectral density (PSD) mask for spectral shaping of an asynchronous digital subscriber line (ADSL) non-overlap spectrum over a plain old telephone system (POTS), the PSD mask represented at least in part by a plurality of break points, the plurality of break points including: ***-97.5 ± 5% decibel-milliwatts per hertz (dBm/Hz) at 0 ± 5% kilohertz (kHz); -97.5 ± 5% dBm/Hz at 4 ± 5% kHz; -92.5 ± 5% dBm/Hz at 80 ± 5% kHz; -56.5 ± 5% dBm/Hz at 138 ± 5% kHz; -56.5 ± 5% dBm/Hz at 1104 ± 5% kHz; -46.5 ± 5% dBm/Hz at 2208 ± 5% kHz; -101.5 ± 5% dBm/Hz at 3925 ± 5% kHz; -101.5 ± 5% dBm/Hz at 8500 ± 5% kHz; -103.5 ± 5% dBm/Hz at 8500 ± 5% kHz; and -103.5 ± 5% dBm/Hz at 11040 ± 5% kHz.***

Applicants respectfully submit that the rejection of claim 10 has been rendered moot. Additionally, Applicants respectfully submit that the instant application's disclosed prior art (Fig. 3 and Fig. 4) fails to disclose, teach, or suggest the above emphasized claim features for similar reasons as discussed regarding the rejection of claim 1 above. Namely, Figs. 3 and 4 do not disclose a plurality of break points at the values or frequencies emphasized in the recitation of the claim above. Thus, for at least these reasons, Applicants respectfully request that the rejection of claim 10 be withdrawn.

Independent Claim 11

Claim 11 recites (emphasis added):

11. A power spectral density (PSD) mask represented at least in part by a plurality of break points, the plurality of break points including: **-90 \pm 5% decibel-milliwatts per hertz (dBm/Hz) at 0 \pm 5% kilohertz (kHz); -90 \pm 5% dBm/Hz at 93.1 \pm 5% kHz; -62 \pm 5% dBm/Hz at 209 \pm 5% kHz; -36.5 \pm 5% dBm/Hz at 255 \pm 5% kHz; -36.5 \pm 5% dBm/Hz at 1104 \pm 5% kHz; -46.5 \pm 5% dBm/Hz at 2208 \pm 5% kHz; -101.5 \pm 5% dBm/Hz at 3925 \pm 5% kHz; -101.5 \pm 5% dBm/Hz at 8500 \pm 5% kHz; -103.5 \pm 5% dBm/Hz at 8500 \pm 5% kHz; and -103.5 \pm 5% dBm/Hz at 11040 \pm 5% kHz.**

Applicants respectfully submit that the rejection of claim 11 has been rendered moot. Additionally, Applicants respectfully submit that the instant application's disclosed prior art (Fig. 3 and Fig. 4) fails to disclose, teach, or suggest the above emphasized claim features for similar reasons as discussed regarding the rejection of claim 1 above. Namely, Figs. 3 and 4 do not disclose a plurality of break points at the values or frequencies emphasized in the recitation of the claim above. Thus, for at least these reasons, Applicants respectfully request that the rejection of claim 11 be withdrawn.

Independent Claim 12

Claim 12 recites (emphasis added):

12. A power spectral density (PSD) mask for spectral shaping of an asynchronous digital subscriber line (ADSL) overlap spectrum over an integrated digital services network (ISDN), the PSD mask represented at least in part by a plurality of break points, the plurality of break points including: **-90 \pm 5% decibel-milliwatts per hertz (dBm/Hz) at 0 \pm 5% kilohertz (kHz); -90 \pm 5% dBm/Hz at 93.1 \pm 5% kHz; -62 \pm 5% dBm/Hz at 209 \pm 5% kHz; -56.5 \pm 5% dBm/Hz at 255 \pm 5% kHz; -56.5 \pm 5% dBm/Hz at 1104 \pm 5% kHz; -46.5 \pm 5% dBm/Hz at 2208 \pm 5% kHz; -101.5 \pm 5% dBm/Hz at 3925 \pm 5% kHz; -101.5 \pm 5% dBm/Hz at 8500 \pm 5% kHz; -103.5 \pm 5% dBm/Hz at 8500 \pm 5% kHz; and -103.5 \pm 5% dBm/Hz at 11040 \pm 5% kHz.**

Applicants respectfully submit that the rejection of claim 12 has been rendered moot. Additionally, Applicants respectfully submit that the instant application's disclosed prior art (Fig. 3 and Fig. 4) fails to disclose, teach, or suggest the above emphasized

claim features for similar reasons as discussed regarding the rejection of claim 1 above. Namely, Figs. 3 and 4 do not disclose a plurality of break points at the values or frequencies emphasized in the recitation of the claim above. Thus, for at least these reasons, Applicants respectfully request that the rejection of claim 12 be withdrawn.

CONCLUSION

Applicants respectfully submit that Applicants' pending claims are in condition for allowance. Any other statements in the Office Action that are not explicitly addressed herein are not intended to be admitted. In addition, any and all findings of inherency are traversed as not having been shown to be necessarily present. Furthermore, any and all findings of well-known art and official notice, and similarly interpreted statements, should not be considered well known since the Office Action does not include specific factual findings predicated on sound technical and scientific reasoning to support such conclusions. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

Respectfully submitted,

/Daniel R. McClure/

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